

REMARKS/ARGUMENTS

Claim 26 has been amended; claims 17, 19, and 22-23 have been cancelled without prejudice; and claims 20, 21, 24, 25, 27, and 28 remain unchanged. Thus, claims 20, 21, and 24-28 are pending.

Claims 17, 22, and 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Baynham (US 6,198,922).

Claims 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baynham.

As amended, all the pending claims of the subject application comply with all requirements of 35 U.S.C. Accordingly, applicant requests examination and allowance of all pending claims.

Allowable Subject Matter

Claims 20, 21, 27, and 28 are allowed over the prior art. The applicants respectfully thank the examiner for the indication of allowable subject matter.

Claim Objections

Claim 26 is objected to because of an informality. Claim 26 has been amended to depend from claim 25.

Claim Rejections - 35 U.S.C. § 102

Claim 24 recites, in part, "wherein information regarding said subset of subcells is replaced with information regarding said particular cell of said first level of said hierarchical data structure, thereby facilitating storage and processing of said geographical zone definition." The applicants respectfully submit that the cited reference does not teach or suggest at least these claim elements.

Embodiments of the present invention provide methods and systems for determining whether the location of a wireless telecommunications device is within a specified area. As discussed in the specification, some embodiments according to the present invention utilize a quadtree data structure. In certain instances, the quadtree can be condensed. "Namely, if all of the squares of a group of four squares that constitute the quadrants of a square at the next highest level are 'flagged,' the square at the next highest level can be flagged and the four squares

deleted from the quadtree." (Specification at page 6, lines 18-20). "A quadtree that has been condensed has lower storage requirements relative to a quadtree that has not been condensed. Further, a condensed quadtree will increase, in certain situations, the speed at which the determination is made of whether the location associated with the wireless station is within the area of interest." (Specification at page 6, lines 23-26).

In contrast, the cited reference does not teach or suggest such a condensation process. Rather, the cited reference appears to merely disclose a top-down subdivision process. In particular, the cited reference appears to discuss a method of using flags, but in another context: tracking whether to not a cell should be subdivided, not whether to condense subcells into a cell of a quadtree.

The cited reference discusses a method of determining if the boundary of a Location Area Code (LAC) intersects a cell. (Baynham at col. 10, lines 14-15). If the boundary of the LAC does not intersect with the cell, then the cell is wholly contained within the LAC, and no further subdivision of the cell is performed. (Baynham at col 9, lines 64-67). No flag is set in this condition. On the other hand, if the boundary of the LAC intersects the cell, a flag is set, indicating that further subdivision of the cell is appropriate. In subsequent steps, flagged cells are subdivided "until either the maximum resolution of the network 100 is reached or until a cell 220 is contained completely within an LAC." (Baynham at col. 10, lines 59-54).

Thus, the cited reference does not teach or suggest condensing a quadtree by replacing "information regarding said subset of subcells" "with information regarding said particular cell of said first level of said hierarchical data structure," as recited by claim 24. On the contrary, the cited reference appears to use a subdivision only approach, only utilizing flags to mark cells for subdivision into subcells. In fact, no discussion of condensation of subcells into cells is provided for or even contemplated by the cited reference. For at least these reasons, claim 24 is in a condition for allowance.

Claim 25 recites, in part, "providing an indication that the wireless station is in an area of interest if the cell found has a flag associated with the cell." Thus, in the claimed invention, a wireless station is indicated as inside the area of interest if the cell is flagged.

As discussed in relation to claim 24, the cited reference appears to utilize flags in a different manner and to accomplish different results than embodiments according to the present invention. In particular, flags are apparently utilized in the cited reference to indicate that "the

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cell 220 will contain subcells," some of which may lie outside the LAC, and therefore, future subdivision is appropriate. For cells completely contained within a LAC, no flag is set. (Baynham at col. 10, lines 45-54). Thus, the cited reference provides no discussion of indicating that a wireless station is in an area of interest by flagging a cell. On the contrary, flagging of cells merely indicates that a subsequent subdivision process is appropriate. For at least these reasons, claim 25 is in a condition for allowance.

Claim 26, which depends from claim 25, is in a condition for allowance, for at least the reasons discussed in relation to claim 25, as well as for the additional limitations it recites.

Claim Rejections - 35 U.S.C. § 103

Claims 19 and 23 stand rejected under 35 U.S.C. § 103(a). Claims 19 and 23 have been cancelled without prejudice.

CONCLUSION

In view of the foregoing, applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400, extension 5518.

Respectfully submitted,



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